

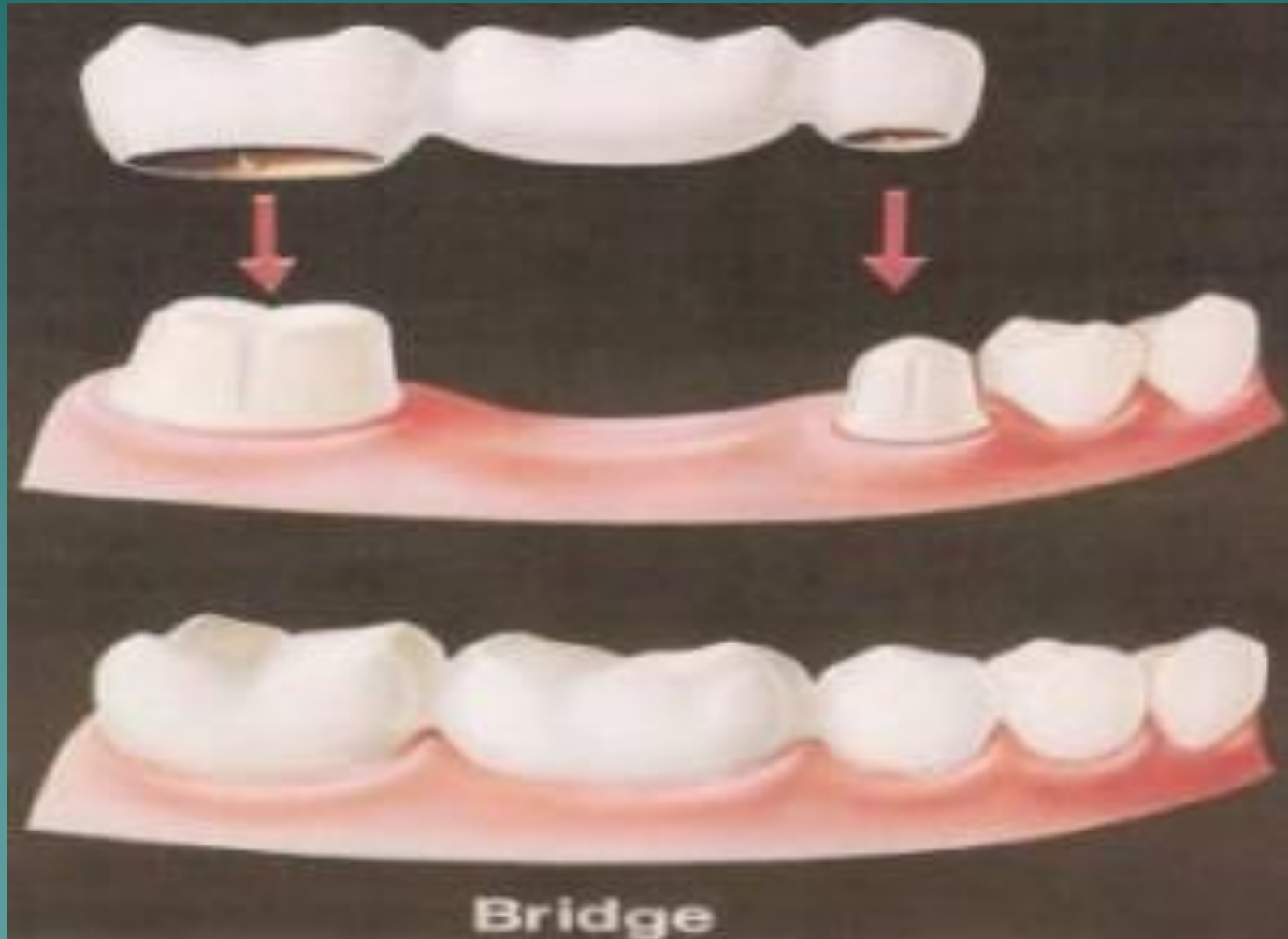
PONTICS

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The Pontic

- ◆ Def: a component of a FPD that replaces the missing natural tooth to restore function and esthetics.
- ◆ Material of manufacture:
 - metal
 - non-metal (all ceramic br/prov br)
 - combination

Bridge components




Temporary bridge



- ◆ According to construction:
 - prefabricated (not used any more)
 - custom made
- ◆ According to shape:
 - conical
 - spheroidal
 - ridge lap
 - modified ridge lap

Factors that affect pontic design

- 1) Biological:
 - cleansable tissue surf
 - adjusts existing occl
 - no pr on alv ridge
- 2) Mechanical:
 - rigid to resist deform
 - strong connectors
 - metal framework helps prevents # of porcelain/ resin facing

- 3) Esthetics:
- looks like missing tooth
 - appears to grow out of the ridge
 - provide sufficient space for esthetic material
- 
- A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, adding a decorative element to the background.

Biological


- ◆ Ridge contact: pressure free pontic, otherwise inflammation/ulceration. During try in any blanching of the mucosa should be removed. Positive pressure results from excessive scraping of ridge area on the cast.
- ◆ Dental plaque: toxins released by microbacteria causes tissue inflammation. Patient must be able to maintain a plaque free area. This will depend on pontic design and material of construction.

- ◆ Gingival surface of pontic: In the anterior region the pontic has a lot of contact with the ridge to give the natural appearance of the tooth emerging from the gums. This is not necessary in most posterior regions, as function and hygiene are more important.
- ◆ Can classify the pontics according to relationship to mucosal contact into:

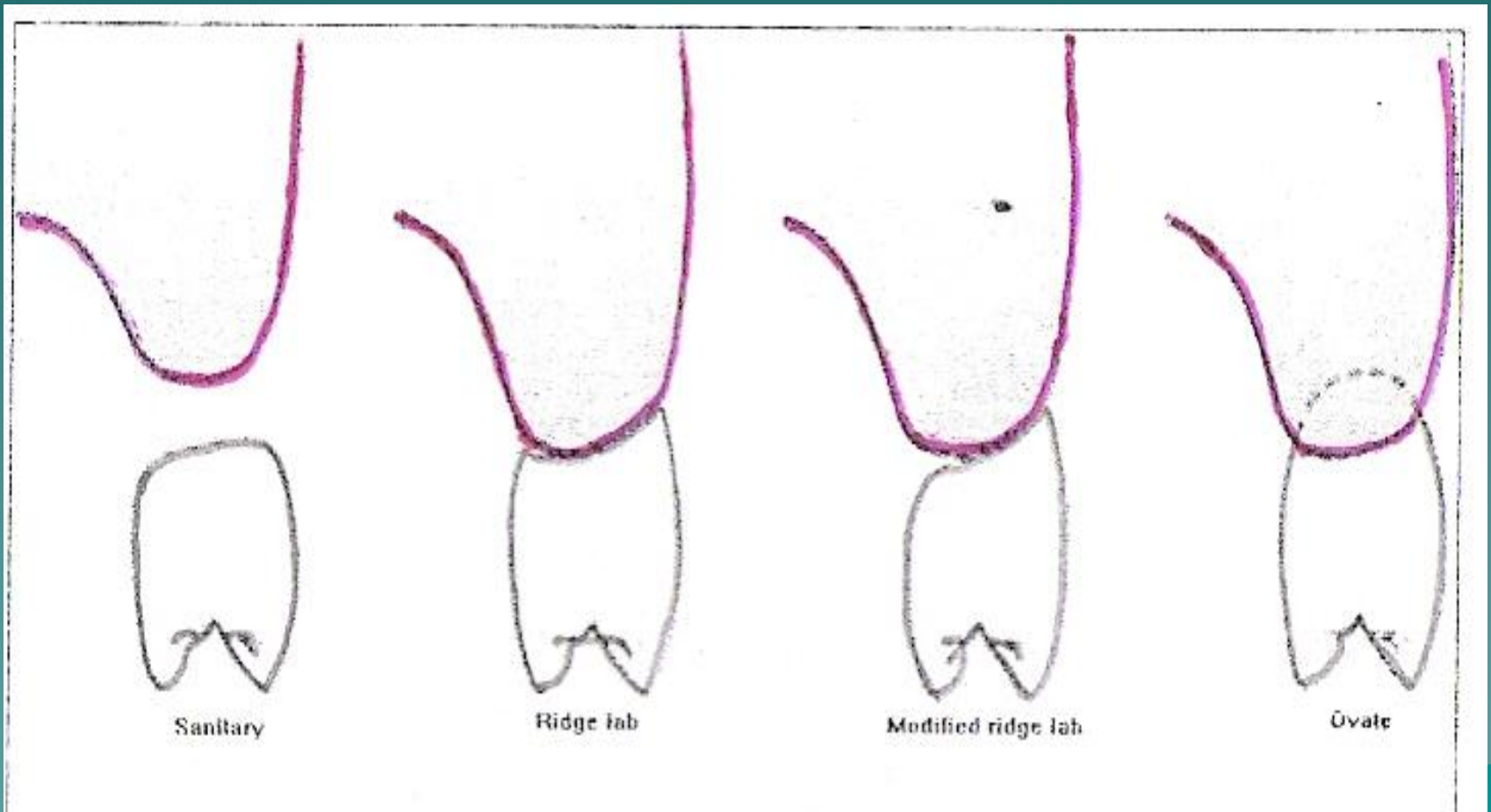
Mucosal

- ◆ Saddle
- ◆ Modified saddle
- ◆ Modified ridge lap

Non-Mucosal

- ◆ Sanitary (hygienic)
 - ◆ Modified sanitary
 - ◆ Bullet
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- A stylized, dark teal silhouette of a mountain range is located in the bottom right corner of the slide, extending from the right edge towards the center.

Pontic shapes



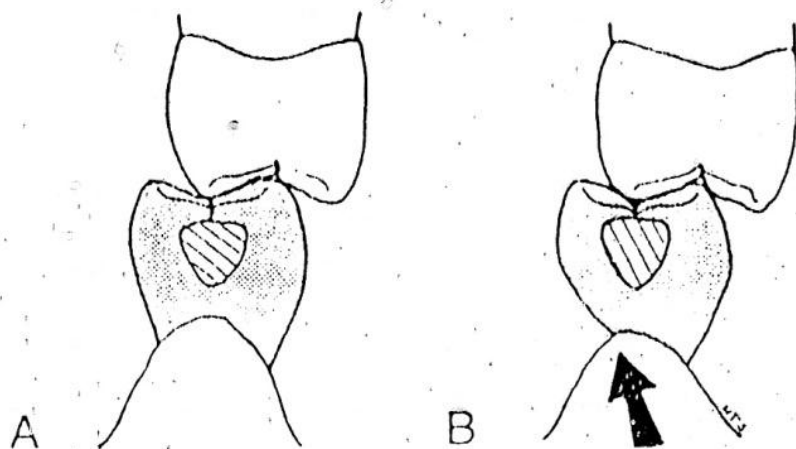


Fig.3: Classic saddle or ridge lap pontic.

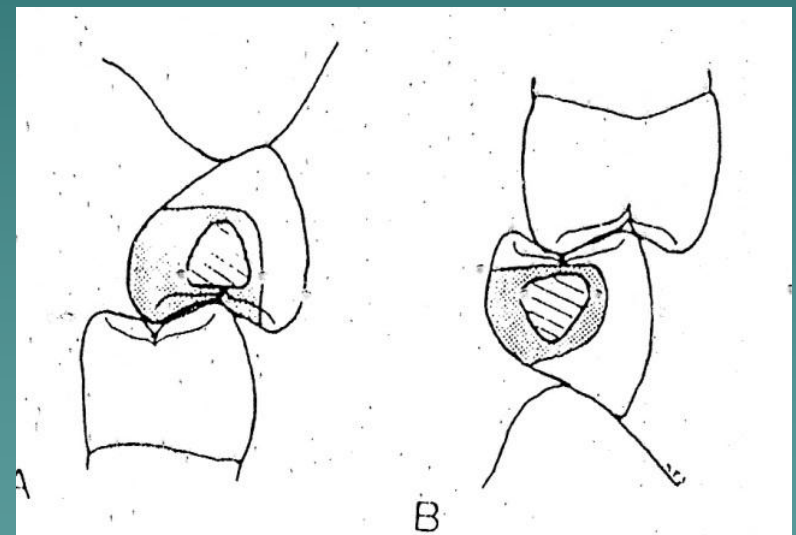


Fig.4: Modified ridge lap pontic.

- a) Maxillary
- b) Mandibular

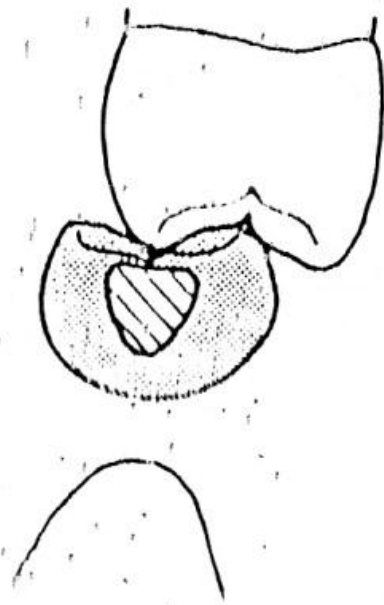
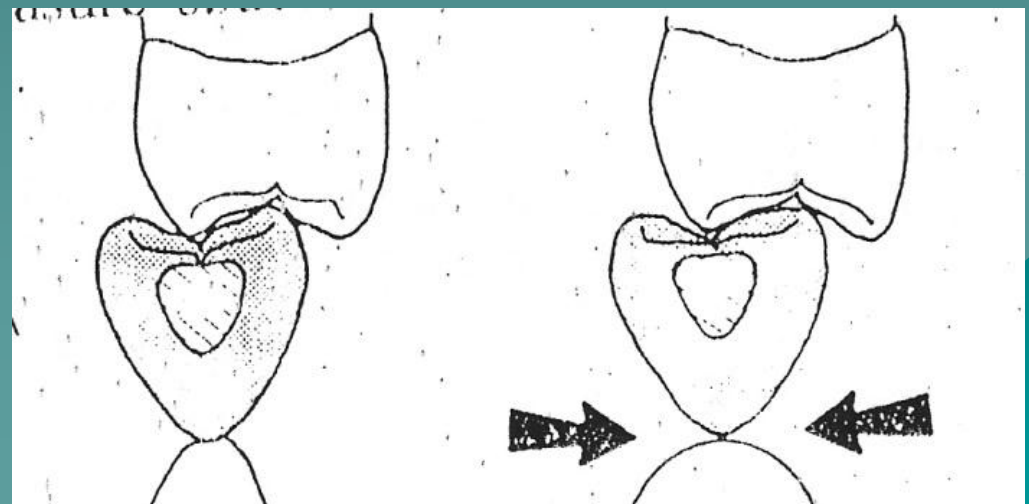


Fig. 5. Sanitary or Hygienic pontic



Pontic Material

- ◆ Should provide: esthetics, strength and biocompatible
- ◆ Glazed porcelain > polished metal > polished resin
- ◆ **Occlusal Forces:**
 - ◆ Can reduce occlusal loading by reducing the B-L width by a third.


Mechanical Principles

- ◆ Strength of the pontic returns to the type of material used. Most widely used are the ceramo-metallic, because it is easily constructed, esthetic and easy to keep clean.
- ◆ Prefabricated pontics are no longer used (pin facing and reverse pin facing)

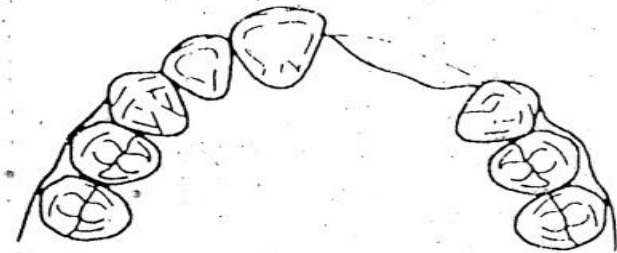
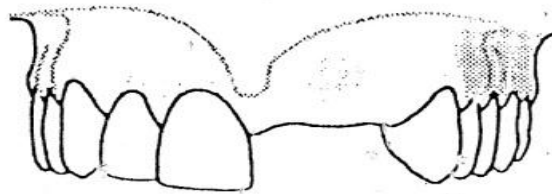
◆ Framework design:

- Uniform thickness (1 or 2mm), wax pattern constructed to full form then cut back.
- Metal surface must be free of pits and smooth to allow complete wetting of porcelain.
- No sharp angle → no stress conc.
- Occlusal centric contact should be at least 1mm away from any C-M junctions to prevent fracture.
- Resin veneered pontics used in long term prov restorations; mechanically fixed to underlying metal; discolours and leaks. Recently new bonds have been invented with the use of microfil comp

Esthetic Considerations

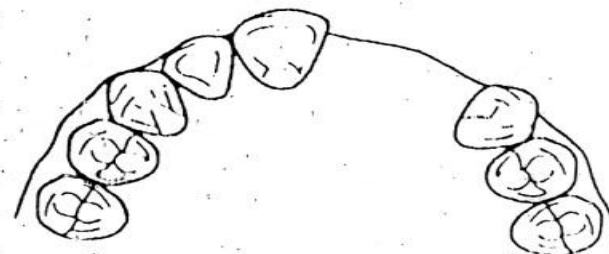
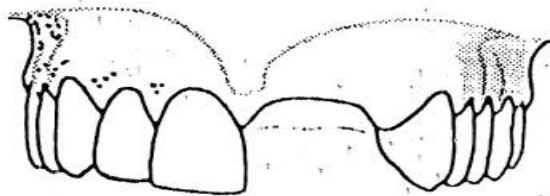
- ◆ The pontic should reproduce the natural tooth in form, contours, colour, gingival margin and embrassures.
 - ◆ Care should be taken at the ginigival margin to avoid a shadow effect.
 - ◆ Can modify the pontic M-D if the space is not enough.
 - ◆ If the vertical bone loss is excessive a root form or pink porcelain can be done.
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- A decorative graphic in the bottom right corner of the slide, consisting of a stylized silhouette of a mountain range in a teal color.

I



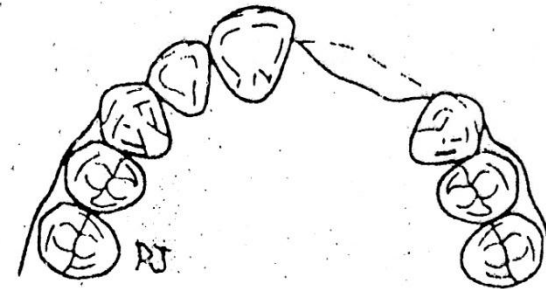
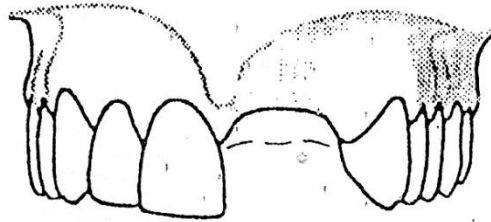
(Fig. 7) class (I): loss of facioliqual ridge width with normal apicoronal height (32.4%).

II



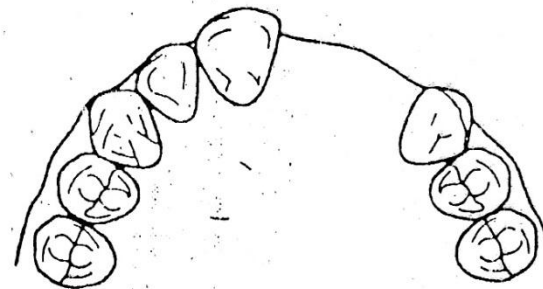
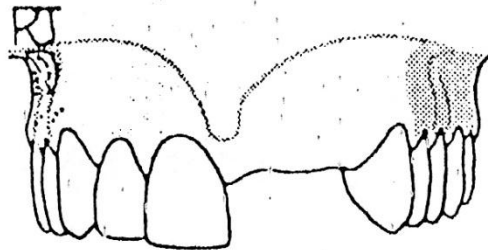
(Fig. 8) Class (II): loss of ridge height with normal width (2.9%) of cases.

III




(Fig.9) Class (III): loss of both ridge width and height (55.9%) of cases.

N



(Fig.10) Class N: Normal classification with minimal deformity (8.8% no defects).

Bone loss treated by:

- ◆ Bone augmentation: real/artificial
 - ◆ Stripping of soft tissue
 - ◆ Pink porcelain
 - ◆ Removable partial denture
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